

WILSON

Appl. No. 09/680,334

January 21, 2004

REMARKS

Reconsideration and allowance of this subject application are respectfully requested.

Claims 1 and 11 have been amended to incorporate the subject matter of dependent claim 2. Because the Examiner has already considered this subject matter and because this amendment helps clarify the distinctions between independent claims 1 and 11 and the applied Panaro reference, Applicant respectfully submits that this amendment should be entered.

All claims remain rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent 5,731,839 to Panaro. This rejection is respectfully traversed.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from that reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Panaro fails to satisfy this rigorous standard.

The inventor of the instant application realized that it was possible to convert a predefined syntax directly into executable test code. This syntax conversion into test codes allows extensive "exercise" or testing of the syntax simply by executing the test code. In particular, a set of test bitstreams can be generated to exercise the bitstream

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decoder extensively, assuming that the decoder is robust enough to operate predictably upon receipt of any test bitstream conforming to the syntax.

As set forth in claim 1, the test code is executed repeatedly until each variable has been assigned each of its interesting values, and in this process, produces a set of bitstreams. Incorporating the syntax within the test code and assigning each variable each of its interesting values produces a set of test bitstreams which will exercise the syntax extensively.

In sections 1 and 2 of the Office Action, the Examiner reiterates unchanged the arguments presented in the previous Office Action, and in that respect, the distinctions made in Applicant's August 7, 2003 response are still valid. The Examiner's additional comments in section 4 of the Office Action are now addressed.

Regarding claim 1, the Examiner appears to be contending that the MPEG coding algorithm identified at column 2, lines 35 to 37 of Panaro is analogous to the "test code" in claim 1, since the test bitstream is provided at the output of the coding algorithm. But Panaro provides no explanation as to how such MPEG coding algorithm is generated. It appears that this MPEG coding algorithm is merely a standard "off-the-shelf" MPEG coding algorithm that Panaro employs to produce the bitstream. This conclusion is consistent with the Panaro's central teachings, which are not concerned with the MPEG coding algorithm itself, but rather with the choice of images from which to generate the test bitstream. See column 2, lines 20 to 45.

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Panaro's standard MPEG coding algorithm does not incorporate the syntax within it, as required by step (a) of claim 1, and does not include the claimed "interesting values" feature. Rather, the MPEG coding algorithm relies on being fed with appropriate input data, which is typically selected manually. In particular, the text at column 3, line 50 to column 4, line 37 of Panaro describes how these inputs are selected with a bidirectional predicted frame and two anchor images forming the inputs.

Steps 204 and 206 of Figure 2 describe the process of selecting these inputs, and at column 4, lines 55 to 57, Panaro specifically states that "the two frames are created by hand, i.e. a user selects appropriate motion vector magnitudes and directions (offsets) that substantially generate the uniformly gray region in an image predicted from the anchor images" (emphasis added). Step 208 of Figure 2 describes encoding the inputs to generate a bitstream. Column 5, lines 9 to 17 clearly state that the MPEG coder is a conventional, block-based, predictive video coder. Panaro's Figure 3 and the associated description confirm that a user manually selects first and second P-frames and a B-frame. This input data is then merely passed through the coder in order to generate a single test bitstream.

Hence, to the extent that the Examiner considers the vector "magnitude" and "direction" to be variables, it is clear that these variables are selected manually (by the user) in order to manually define inputs to an MPEG coding algorithm used to generate the bitstream. So, to the extent the Examiner considers this MPEG coding algorithm analogous to the test code required in claim 1, it is clear that this test code does not

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incorporate the syntax, as recited in claims 1 and 11. Panaro further fails to disclose (1) each variable having a number of interesting values, and (2) repeating execution of the test code until each variable has been assigned each of its interest values, as also required by claims 1 and 11.

In section 4 of the Office Action, the Examiner addresses claim 2, and points to Figure 3 and column 5, lines 33 to 55, as allegedly showing a process of generating sets of bitstream values. Although this shows repetition of the B-frame input within the generated test bitstream, those skilled in the art readily appreciate that the sequence shown at column 5, line 39 is merely a single test bitstream. Step (b) of claim 1 specifies that a test bitstream is generated by executing the test code during which each of the variables is assigned one of its interesting values. To generate a different test bitstream, different interesting values must be assigned to each of the variables. Column 5, lines 33 to 55 of Panaro confirm that this is not the case for sequence identified at column 5, line 39, i.e., the same B-frame is used. Hence, the direction and magnitude values have not been altered during the generation of that sequence. The sequence shown at column 5, line 39 is a single test bitstream.

Column 5, lines 40 to 55, referred to by the Examiner, teach that certain interesting values (motion off the edge of the image) are excluded from any bitstream that might be generated using the Panaro's approach. Accordingly, Panaro explicitly teaches away from the approach defined in the independent claims 1 and 11.

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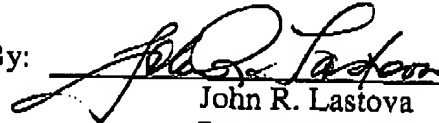
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Having overcome the Examiner's only outstanding rejection set forth in the final Office Action, the pending claims are in condition for allowance and a notice to that effect is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or a personal interview will facilitate allowance of one or more the claims, the Examiner is respectfully requested to contact the undersigned at the telephone number below.

Respectfully submitted,

NIXON & VANDERHYE P.C.

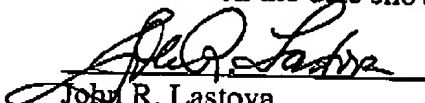
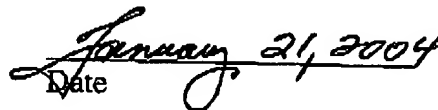
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